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## Department of Energy

Richland Field Office

P.O. Box 550

Richland, Washington 99352

93-RPA-246

JUL 22 1993



Mr. David C. Nylander  
State of Washington  
Department of Ecology  
7601 W. Clearwater Ave.  
Suite 102  
Kennewick, Washington 99336

## MANAGEMENT OF PYROPHORIC METALS

The U.S. Department of Energy, Richland Operations Office (RL) seeks your concurrence that the removal of finely divided Zircaloy-2 (a zirconium alloy) from nuclear fuels fabrication equipment does not constitute dangerous waste treatment. The fabrication of N Reactor's nuclear fuel created finely divided uranium and Zircaloy-2 that are pyrophoric. This material is found on metal working equipment located in the 333 and 313 Buildings in Hanford's 300 Area. Approximately, 100 pounds of pyrophoric fines are expected to be removed from the equipment.

Pyrophorics would be separated from the equipment by applying a non-hazardous oil (consisting of mineral and orange oil) to the finely divided metals and then scraping and/or brushing them off of the equipment using non-sparking tools. The oil causes the finely divided metals to adhere to each other, which prevents the spread of contamination and reduces the contact with air. Once separated, the equipment will be disposed of as radioactive low level waste and the fines will be treated (deactivated) at the 304 Concretion Facility. The deactivation is planned to occur during cool months of the year in order to minimize the generation of radioactive low level waste cooling water.

As you are aware, the 304 Concretion Facility is an interim status treatment facility that is approaching closure. The operation of the 304 Concretion Facility was planned to cease by October 1993, but due to the need to manage the pyrophoric fines discussed above the facility will continue to operate beyond that date.

RL believes that the removal of the Zircaloy-2 fines from the fuels fabrication equipment would not constitute treatment of a dangerous waste. Your expeditious concurrence regarding this issue is requested by July 31, 1993, to allow for a timely completion of treatment activities in the 304 Concretion Facility prior to the closure of the facility. The implementation of an approved closure plan is slated to begin as early as January 1995.

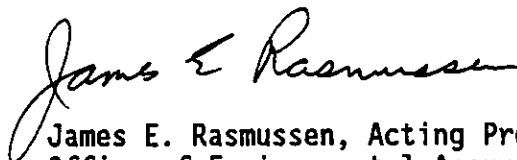
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Mr. David C. Nylander  
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If you have questions concerning this request, please contact me or  
Alex Teimouri of my staff on (509)376-6222.



James E. Rasmussen, Acting Program Manager  
Office of Environmental Assurance,  
Permits, and Policy

cc: G. C. Hofer, EPA  
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David C. Nylander, Ecology

Incoming: 9305579  
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Subject: MANAGEMENT OF PYROPHORIC METALS

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